

We claim:

- 1 1. A method for improving information retrieval, classification, indexing, and
2 summarization, comprising:
3 identifying a compound document as a coherent body of hyperlinked material on a single
4 topic as created by a number of collaborating authors;
5 analyzing the content and structure of the compound document to find a preferred entry point
6 for the compound document;
7 processing the compound document as a whole, including at least one of indexing,
8 classification, and retrieval; and
9 processing the compound document from the entry point, including at least one of creating at
10 least one of presentation of results from retrieval, summarization, and classification.
- 1 2. The method of claim 1 wherein the body of hyperlinked material includes at least one of:
2 the internet, an intranet, and a digital library.
- 1 3. The method of claim 1 wherein the body of hyperlinked material is distributed over a
2 plurality of URLs.
- 1 4. The method of claim 1 wherein the identifying includes observing the results of a number
2 of heuristics run on the body of hyperlinked material and related hyperlinks.
- 1 5. The method of claim 4 wherein the heuristic includes identifying hyperlinks that link
2 within the same directory and include a sufficient quantity of common anchor text.
- 3 6. The method of claim 4 wherein the heuristic includes identifying hyperlinks that contain
4 linguistic structures that indicate relationships between parts of a document including at least
5 one of a list of page numbers, and the terms "next", "previous", "index", "contents", and their
6 non-English equivalents.

- 1 7. The method of claim 4 wherein the heuristic includes identifying external hyperlinks to
2 the same places.
- 1 8. The method of claim 4 wherein the heuristic includes identifying at least one of: similar
2 creation dates and similar last-modified dates.
- 1 9. The method of claim 4 wherein the heuristic includes identifying individual URLs having
2 similar structure indicating an order of inclusion in the compound document.
- 1 10. The method of claim 4 wherein the heuristic includes identifying a link structure of
2 "wheel" form.
- 1 11. The method of claim 1 wherein the analyzing includes observing the results of a number
2 of heuristics run on the component document and related hyperlinks.
- 1 12. The method of claim 11 wherein the heuristic includes identifying specific filenames
2 that define the entry point, including at least one of: "index" and "default" .
- 1 13. The method of claim 11 wherein the heuristic includes identifying a particular
2 component document in the compound document as the entry point because the component
3 document has several in-links.
- 1 14. The method of claim 13 wherein the in-links are from outside the compound document.
- 1 15. The method of claim 11 wherein the heuristic includes identifying a particular
2 component document in the compound document as the entry point because the component
3 document has several out-links.

1 16. The method of claim 11 wherein the heuristic includes determining a measure of vector
2 distances along intra-document links between a particular component document and all other
3 component documents in the compound document.

1 17. The method of claim 11 wherein the heuristic includes determining whether a URL has
2 links pointing to longer URLs having common directory components followed by different
3 ending directory components.

1 18. The method of claim 17 wherein the ending directory components contain specific
2 identifying information.

1 19. The method of claim 11 wherein the analyzing includes combining the results of a
2 number of heuristics run on various component documents in the compound document,
3 wherein the results include numerical scores and the combining includes a weighted
4 averaging of the numerical scores into an overall score, and the maximum overall score
5 determines the preferred entry point.

1 20. A system for improving information retrieval, indexing, and summarization comprising:
2 a compound document identifier that detects a coherent body of hyperlinked material on a
3 single topic as created by a number of collaborating authors;
4 an analyzer that finds a preferred entry point for the compound document according to the
5 content and structure of the compound document; and
6 a compound document processor that performs at least one of indexing, classification, and
7 retrieval, for the compound document as a whole, and then performs at least one of
8 creating at least one presentation of results from retrieval, summarization, and
9 classification.

1 21. A computer program product instantiated on a computer-readable medium, comprising:
2 a first code means for identifying a compound document as a coherent body of hyperlinked
3 material on a single topic as created by a number of collaborating authors;
4 a second code means for analyzing the content and structure of the compound document to
5 find a preferred entry point for the compound document; and
6 a third code means for processing the compound document, wherein the processing includes
7 at least one of creating at least one presentation of results from retrieval,
8 summarization, and classification.